

# Stewardship Notes

Indiana Division of Forestry

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## Woodland Opening Plantings

One management option for regenerating desirable tree species in a woodland is to plant woodland openings. This method controls species composition, spacing and location of the species planted, as compared to natural regeneration, which depends on dropped seed to regenerate an area. Many desirable species, like oaks and black walnut, do not easily regenerate naturally in existing forest environments, so planting provides an opportunity to maintain these species as part of the forest.

Before openings can be planted, they must be created. Openings may be the result of timber harvesting, storms, or other disturbances. To successfully plant and grow tree seedlings in a forest opening, the opening should be at least 1 1/2 times as wide as the height of the surrounding trees. For example: if an opening is 160 feet wide and the trees on the edge of the opening are 80 feet tall, the opening is large enough to support tree planting. Larger openings are generally preferred since they have less edge area that is shaded most of the day. Openings of one acre or more (208 feet per side) are most likely to regenerate light-loving trees.

Most openings will need existing trees and shrubs eliminated to provide a hospitable growing site for seedlings. Undesirable tree species should be girdled or cut down and the girdle or stump treated with herbicide to prevent resprouting. Follow all label directions when using herbicides. Stump sprouts from cut trees can quickly overtop planted seedlings, so it is very important to kill the roots as well as the undesirable trees in the opening. Desirable tree species in the opening should be cut off just above the ground but not treated with herbicide. These stumps will often resprout and produce a desirable, fast growing tree.

Once the existing trees in the opening have been girdled or cut down, lay out the planting area. Plantings in forest openings can be done as close as 6 x 6 feet or as wide as 10 x 10 feet between trees. Advantages of closer spacing are dense plantings with smaller holes due to seedling death, and better tree form due to competition between trees, as well as quick shading of the site to reduce competition. Advantages of wide spacing include less expense to plant and maintain and a longer growing time before the trees need thinning. Consult a forester for advice on spacing. Flagging the seedlings as they are planted will help you find the tree later during maintenance work.

Selecting tree species to plant in an opening should be done with help from a forester. The forester can determine the tree species that will grow best on the site and still provide

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the values you want: timber, wildlife, scenery, etc. Tree seedlings are available from the state tree nurseries; order forms can be obtained in the fall from your district forester.

The landowner may plant the seedlings following directions provided by the nursery, or may hire professional tree planters to plant the trees instead. A list of private professional foresters is available from your district forester. It is very important that weed and grass growth around the planted seedlings be eliminated. This may be done with herbicides, mulch, or commercially available barriers. Protecting the seedlings from weed and grass competition is vital to the seedlings' survival and growth.

Control weeds and grasses in a circle about three feet in diameter around the seedling for the first two to three years of seedling growth. This allows the seedling root system to become established and develop a competitive advantage over surrounding vegetation.